Author Index of Volume 47

Ageev, V. P., 269
Aksenov, I. I., 98, 252
Akulich, V. V., 292, 522, 792
Allouard, M., 433
Amornkitbamrung, V., 533
Anttila, A., 180
Arai, T., 710
Armeyev, V. Yu., 279

Balk, Y.-J., 545
Banholzer, W., 51
Beetz, Jr., C. P., 375
Berriche, R., 696
Bertran, E., 263
Beulens, J. J., 401
Blamires, N. G., 344
Bouilov, L. L., 481, 538
Bourdon, E. B. D., 509
Brozek, T., 496
Buckley-Golder, I. M., 344, 365, 465
Buerki, P. R., 22
Buuron, A. J. M, 401

Campargue, A., 608
Catherine, Y., 69
Cernik, R. J., 668
Chalker, P. R., 344, 365
Chapliev, N. I., 269, 279, 481, 730
Chenevier, M., 608
Cherian, K. A., 127
Chermin, M., 39
Cholach, A. R., 224
Chuvaev, V. F., 538
Clark, C. D., 336
Collins, C. B., 244, 754
Cooper, C. V., 375
Cottrell, S. P., 668

Dasgupta, D., 218, 740
Davanloo, F., 244, 754
Deák, P., 517
Dehbi-Alaoui, A., 315, 327, 722
Delhaes, P., 299
Demichelis, F., 218, 740
Dickerson, C. B., 336
Dimigen, H., 691
Dobrev, D., 623
Dorfman, V., 308
Dorfman, V. F., 269
Duley, W. W., 509

Eisele, I., 746
Ensinger, W., 418
Erwin, S. C., 487
Esteve, J., 89, 263
Eun, K. Y., 545
Evans, A. C., 662

Fabisiak, K., 528
Fabrian, D. J., 173
Feng, Z., 631
Field, J. E., 631
Flaskamp, K., 156
Franks, J., 662, 668, 722
Frech, G., 418
Fujimoto, K.-I., 233
Funamoto, H., 474

Gall, N. R., 224
Gantz, R. H., 496
Giber, J., 517
Giling, L. J., 39, 113
Giorgi, R., 287
Glass, J. T., 465
Glushko, T. N., 269
Gorban, S. V., 618
Gorbunov, A. A., 503
Gorodetskii, V. V., 224
Gorokhovsky, V., 106, 770
Gorpinchenko, S. D., 201
Grinberg, V. R., 388
Grunberg, P., 687

Harper, R. E., 344
Hás, Z., 106
Haubner, R., 59, 585, 600
Hirvonen, J.-P., 180
Hoffman, P., 528
Holiday, P., 315, 327
Honeybone, P. J. R., 668
Howells, W. S., 668
Hübsch, H., 691

Jander, D. R., 244, 754
Janssen, G., 39, 113
Jiang, X., 687
Johnston, C., 344, 365
Jones, A. M., 365
Jones, A. P., 509
Juengerman, E. M., 244, 754

Kania, D. R., 356
Kapustin, I. A., 292, 522, 792
Karpukhina, T. A., 538

Kehl, R., 51
Klages, C.-P., 13
Klotsman, S. M., 201, 209
Klyuev, Yu. A., 388
Kobashi, K., 465
Koidl, P., 156, 426
Kolchemanov, N. A., 388
Kono, T., 233
Kononenko, T. V., 269, 730
Konov, V. I., 481, 503
Koseki, O., 474
Koskinen, J., 180
Kostadinov, L., 623
Krokoszinski, H.-J., 761
Kumagai, K., 465
Kurmaev, E. Z., 628
Kuzmichov, A. V., 269
Kuzmina, E. V., 201
Kvaskov, V. B., 481

Landen, O. L., 356
Landstrass, M., 356
Lascovich, J. C., 287
Latev, D., 308
Lavigne, P., 188
Lechner, J., 746
Lee, T. J., 244, 754
Leutwyler, S., 22
Locher, R., 426
Lorenz, H., 746
Loubnin, E. N., 279
Lux, B., 59, 585, 600
Lux, H., 553

Maass, F., 89
Mal, A. K., 677
Marcus, B., 608
Matthews, A., 315, 327, 722
Mermoux, M., 608
Michalski, A., 144
Mikhailov, V. I., 279
Mitura, S., 106
Miyadera, H., 1
Miyata, K., 465
Miyauchi, S., 465
Murakawa, M., 572, 654
Muranaka, Y., 1

Nakaue, A., 465
Naletov, A. M., 388
Nanya, T., 84
Naoi, K., 84
Nepsha, V. I., 388
Newport, R. J., 668

Elsevier Sequoia/Printed in The Netherlands

Nishimura, K., 465
Novikov, N., 770

Oakes, J., 600
Oechsner, H., 162, 517
Oguri, K., 710
Ohl, A., 29
Okada, M., 233
Okoli, S., 585
Olszyna, A., 144, 496
Ottaviani, G., 287

Pan, L. S., 356
Pan, X.-D., 173
Pan, X. X., 600
Pascual, E., 89, 263
Philippoz, J.-M., 528
Philipps, V., 156
Pianetta, P., 356
Pickett, W. E., 487
Pimenov, S. M., 481
Pirri, C. F., 740
Pivin, J. C., 433
Plano, L. S., 356
Plotnikov, S. A., 201, 209
Pompe, W., 455
Prince, R. H., 509
Puzikov, V. M., 445
Pypkin, B. N., 270, 308

Ralchenko, V. G., 279
Reichelt, K., 687, 691
Revell, P., 662 668
Ricci, M., 299
Rotureau, G., 433
Rubshtein, A. P., 209
Rut'kov, E. V., 244

Saijo, K., 646
Samsonenko, N. D., 618
Sato, M., 233
Satrapa, D., 59
Scaglione, S., 287
Schäfer, L., 13
Schaminée, J. J. D., 113
Scheibe, H.-J., 455
Schmidt, K., 691
Schmidt, M., 29
Schoeneich, B., 455
Schram, D. C., 401
Schröer, A., 418
Seal, M., 39, 113
Selifanov, O. V., 292, 522, 792
Semenov, A. V., 445
Serra, C., 89, 263
Shamin, S. N., 628
Shibuki, S., 646
Shibuya, Y., 84
Shull, A. L., 696
Siemroth, P., 455
Singh, A., 188
Smetana, W., 553
Smirnov, M. Yu., 224
Smolin, A. A., 269, 730
Sokołowska, A., 144
Spytsin, B. V., 481
Stanishevskii, A. V., 292, 522, 792
Strel'nitskij, V. E., 98, 252
Stritzker, B., 687
Sugita, T., 474
Suttisiri, N., 533
Szmidt, J., 496

Tagliaferro, A., 218, 740
Takatsu, S., 646
Takeuchi, S., 572, 654
Tanaka, K., 233
Teremetskaya, I. G., 481
Timchenko, V. I., 618
Tochitsky, E. I., 292, 522, 792
Tokiy, V. V., 618
Tomcik, B., 162
Tontegode, A. Ya., 224
Trachtenberg, I. Sh., 201
Trakhtenberg, I. Sh., 209
Trinquecoste, M., 299

Uryukov, B., 770

van der Bergh, H., 528
van Enckevort, W. J. P., 39, 113
Vandersande, J. W., 392
Verwoerd, W. S., 578
Vietzke, E., 156
Vinet, F., 608
Vollenberg, W., 39, 113
Vykhodets, V. B., 209

Wagal, S. S., 257
Wang, M., 691
Weglein, R. D., 677
Weimer, K., 578
Wild, C., 426
Wild, Ch., 156
Wilson, R. G., 559
Wolf, G. K., 418
Wu, T. W., 696

Yagi, M., 646
Yamashita, H., 1
Yoshino, N., 84

Zdunek, K., 144
Zhang, W., 69
Zlobin, A. Yu., 481
Zoltan, L. D., 392

Subject Index of Volume 47

1.681 ev
  1.681 eV centre in polycrystalline diamond, 336
Abrasion
  abrasion resistance of diamond-like carbon coatings on thick film resistor material, 761
  evaluation of abrasion resistance and adhesion strength of brazed diamond film by a shearing test, 572
Acoustic microscopy
  elastic characterization of diamond films by acoustic microscopy, 677
Adhesion
  evaluation of abrasion resistance and adhesion strength of brazed diamond film by a shearing test, 572
  improvements in adhesive strength and cutting performance of diamond-coated tools, 646
Aluminium
  application of brazed diamond film as insert for turning aluminium alloys, 654
Amorphous carbon
  diamond-like properties of amorphous carbon and hydrogenated amorphous carbon thin films, 218
Annealing
  Ar+ laser annealing and etching of hydrogenated amorphous carbon films, 279
Arc-discharge methods
  diamond-like carbon coatings by arc-discharge methods, 180
Argon
  Ar+ laser annealing and etching of hydrogenated amorphous carbon films, 279
Atom beams
  optical and mechanical properties of carbon films grown using a fast atom beam source, 722
Atomic carbon
  hydrogenation of the atomic carbon deposited on the Pt(111) surface studied by the energy electron loss spectroscopy and thermal desorption mass spectrometry, 224
Atomic cluster study
  atomic cluster study of chemisorption and epitaxial diamond films on an Si(100) substrate, 578
Atomic structure
  diamond–nickel interfaces: calculation of the electronic and atomic structure and Schottky barriers, 487

Bias
  clarification of the effect of bias in the hot filament process, 51
  plasma deposition of hydrogenated amorphous carbon (a-C:H) under a wide bias potential range, 89
Bioengineering
  diamond-like carbon applied to bioengineering materials, 662
Brazing
  application of brazed diamond film as insert for turning aluminium alloys, 654
  evaulation of abrasion resistance and adhesion strength of brazed diamond film by a shearing test, 572
Brillouin light scattering
  Brillouin light scattering from the Rayleigh surface phonon of thermally annealed a-C:H films, 687

Carbide
  chemical vapour deposition diamond coatings on cemented carbide tools, 600
Carburization
  carburization of tungsten and tantalum filaments during low-pressure diamond deposition, 585
Cascaded arc d.c. plasma
  carbon deposition using an expanding cascaded arc d.c. plasma, 401
Cemented
  chemical vapour deposition diamond coatings on cemented carbide tools, 600
Chemical transport
  a laser-induced chemical transport reaction method for diamond deposition, 528

Elsevier Sequoia/Printed in The Netherlands

Chemisorption
atomic cluster study of chemisorption and epitaxial diamond films on an Si (100) substrate, 578
Cutting performance
improvements in adhesive strength and cutting performance of diamond-coated tools, 646

Defects
electron spin resonance study of the defects in polycrystalline diamond films, 538
electron spin resonance spectroscopy of impure and pure structural defects in the diamond, 618
thermal chemical vapour deposition of homoepitaxial diamond: dependence of surface morphology and defect structure on substrate orientation, 39
Density of states
origin of optical absorption and the electron spin resonance signal in amorphous carbon and amorphous hydrogenated carbon: a proposed density-of-states model, 740
Depth distributions
depth distributions and range parameters for elements implanted into single-crystal diamonds and chemically vapor-deposited polycrystal diamond films, 559
Deuterium
use of deuterium for examination of C:H films, 209
Diamond polymers
application of "diamond polymer" films in hard disk technology, 308
Diamond powder
substrate-free gas-phase synthesis of diamond powder by CO_2 laser pyrolysis of C_2H_4, 22
Diamond substrates
rapid growth of single-crystal diamond on diamond substrates, 113
Diamond-like coatings
properties of diamond-like coatings prepared by vacuum arc deposition, 98
Dielectric strength
dielectric strength of thin passivating diamond films for semiconductor devices, 496
Dissociation
deposition of carbon films by the dissociation of methane in r.f. discharge, 69
Doping
electrical properties of doped and undoped chemically vapour deposited diamond films, 344
Dual graphite targets
formation of diamond-like carbon films by 50 Hz sputtering from dual graphite targets, 533

Elastic characterization
elastic characterization of diamond films by acoustic microscopy, 677
Electrical conductivity
high temperature electrical conductivity measurements of natural diamond and diamond films, 392
Electrical erosion
electrical erosion pulsed plasma accelerators for preparing diamond-like coatings, 522
Electrical properties
electrical properties of doped and undoped chemically vapour deposited diamond films, 344
Electron spin resonance
electron spin resonance study of the defects in polycrystalline diamond films, 538
electron spin resonance spectroscopy of impure and pure structural defects in the diamond, 618
origin of optical absorption and the electron spin resonance signal in amorphous carbon and amorphous hydrogenated carbon: a proposed density-of-states model, 740
Electronic structure
diamond–nickel interfaces; calculation of the electronic and atomic structure and Schottky barriers, 487
Ellipsometric study
ellipsometric study of diamond-like thin films, 263
Emission spectroscopy
relationship between emission spectroscopy and structural properties of diamond films synthesized by plasma-assisted chemical vapor deposition, 608

Epitaxy
atomic cluster study of chemisorption and epitaxial diamond films on an Si(100) substrate, 578
Etching
Ar+ laser annealing and etching of hydrogenated amorphous carbon films, 279
microfabrication of diamond films: selective deposition and etching, 465
Ethanol
plasma-assisted chemical varpour deposition of diamond from an ethanol–water–hydrogen gas mixture, 623
Ethene
substrate-free gas-phase synthesis of diamond powder by CO_2 laser pyrolysis of C_2H_4, 22

Fatigue
microindentation fatigue tests on submicron carbon films, 696
Field effect transistors
diamond-like films as a protecting insulator for gas-detecting suspended-gate field effect transistors, 746
Friction
friction of diamond on diamond and chemical vapour deposition, 631

Glow-discharge-activated CVD
aspects of diamond deposition by anomalous pulsed d.c. glow-discharge-activated chemical vapor deposition, 59
Graphite
characterization of diamond-like films prepared by laser ablation of graphite, 509

Hard disks
application of "diamond polymer" films in hard disk technology, 308
Homoepitaxial diamond
thermal chemical vapour deposition of homoepitaxial diamond: dependence of surface morphology and defect structure on substrate orientation, 39
Hot filament process
clarification of the effect of bias in the hot filament process, 51
Hot-filament CVD
effects of methane concentration in hydrogen on the microstructure and properties of diamond films grown by hot-filament chemical vapour deposition, 375
Hybrid technique
optical properties of carbon films deposited using a hybrid physical vapour deposition technique, 327
physical properties of carbon films produced using a hybrid physical vapour deposition technique, 315
Hydrogen
diamond-like properties of amorphous carbon and hydrogenated amorphous carbon thin films, 218
direct ion-beam deposition of amorphous hydrogenated carbon films, 426
physical properties of plasma-enhanced chemically vapour deposited hydrogenated and nitrogenated amorphous carbons, 299
plasma deposition of hydrogenated amorphous carbon (a-C:H) under a wide bias potential range, 89
plasma-assisted chemical vapour deposition of diamond from an ethanol–water–hydrogen gas mixture, 623
shape changes during growth of diamond particles and films synthesized from CH_4–H_2– (O_2) by tungsten-filament chemical vapour deposition, 545
study of the sp^2-to-sp^3 ratio of dual-ion-beam sputtered hydrogenated amorphous carbon films, 287
textured structure of diamond-like carbon prepared with hydrogen, 754
effects of methane concentration in hydrogen on the microstructure and properties of diamond films grown by hot-filament chemical vapour deposition, 375
properties of titanium-containing amorphous hydrogenated carbon films, 691
reaction of atomic hydrogen with a-C:H and diamond films, 156
Hydrogenation
hydrogenation of the atomic carbon deposited on the Pt(111) surface studied by the energy electron loss spectroscopy and thermal desorption mass spectrometry, 224

Implantation
depth distributions and range parameters for elements implanted into single-crystal diamonds and chemically vapor-deposited polycrystal diamond films, 559

Impulse plasma
diamond layers deposited from impulse plasma, 144
Insulator
diamond-like films as a protecting insulator for gas-detecting suspended-gate field effect transistors, 746
Intermediate layers
deposition of a diamond-like carbon film on a stainless steel substrate: studies of intermediate layers, 84
Internal stresses
evaluation of internal stresses present in chemical vapor deposition diamond films, 365
Ion beams
deposition of diamond-like carbon films by low energy ion beam and d.c. magnetron sputtering, 188
direct ion-beam deposition of amorphous hydrogenated carbon films, 426
ion beam deposition of diamond-like carbon films, 445
properties and structure of carbon films prepared by ion-beam deposition, 233
study of the sp^2-to-sp^3 ratio of dual-ion-beam sputtered hydrogenated amorphous carbon films, 287
properties of amorphous carbon films obtained by ion-beam-assisted carbon evaporation, 418
Ion implantation
determination of the optimal energy range for obtaining diamond-like films by ion implantation, 433

Laser ablation
characterization of diamond-like films prepared by laser ablation of graphite, 509
Laser arc deposition
laser arc: a new method for preparation of diamond-like carbon films, 455
Laser damage
pulsed CO_2 laser damage of diamond-like carbon films, 730
Laser ion source
deposition of diamond-like carbon film by laser ion source, 257
Laser plasma diamond
preparation and study of laser plasma diamond, 244
Lasers
laser-induced chemical transport reaction method for diamond deposition, 528
Ar+ laser annealing and etching of hydrogenated amorphous carbon films, 279
substrate-free gas-phase synthesis of diamond powder by CO_2laserpyrolysis of C_2H_4, 22
Light-induced variations
light-induced variations of optical properties of diamond-like films, 269
Low temperature growth
low temperature growth of highly purified diamond films using microwave plasma-assisted chemical vapour deposition, 1

Machine elements
system for depositing hard diamond-like films onto complex-shaped machine elements in an r.f. arc plasma, 106
Magnetron sputtering
deposition of diamond-like carbon films by low energy ion beam and d.c. magnetron sputtering, 188
Metastable diamond
nickel-assisted metastable diamond formation (surface recrystallization) in a dissolution medium at atmospheric pressure, 127
Methane
deposition of carbon films by the dissociation of methane in r.f. discharge, 69
shape changes during growth of diamond particles and films synthesized from $CH_4-H_2-(O_2)$ by tungsten-filament chemical vapour deposition, 545
effects of methane concentration in hydrogen on the microstructure and properties of diamond films grown by hot-filament chemical vapour deposition, 375
Microfabrication
microfabrication of diamond films: selective deposition and etching, 465
Microindentation
microindentation fatigue tests on submicron carbon films, 696
Microstructure
effects of methane concentration in hydrogen on the microstructure and properties of diamond films grown by hot-filament chemical vapour deposition, 375

Microwaves
growth and properties of diamond films prepared by microwave plasma chemical vapour deposition using different oxygen-containing source gases, 13
investigation of diamond growth in a new planar microwave plasma source, 29
low temperature growth of highly purified diamond films using microwave plasma-assisted chemical vapour deposition, 1
photoconductive measurements on microwave-assisted plasma-enhanced chemically vapor deposited diamond films, 356
Morphology
thermal chemical vapour deposition of homoepitaxial diamond: dependence of surface morphology and defect structure on substrate orientation, 39

Natural diamond
high temperature electrical conductivity measurements of natural diamond and diamond films, 392
Neutron scattering
structure of a C:H by neutron and X-ray scattering, 668
Nickel
diamond–nickel interfaces: calculation of the electronic and atomic structure and Schottky barriers, 487
nickel-assisted metastable diamond formation (surface recrystallization) in a dissolution medium at atomspheric pressure, 127
Nitrogen
physical properties of plasma-enhanced chemically vapour deposited hydrogenated and nitrogenated amorphous carbons, 299

Optical absorption
origin of optical absorption and the electron spin resonance signal in amorphous carbon and amorphous hydrogenated carbon: a proposed density-of-states model, 740
Optical properties
light-induced variations of optical properties of diamond-like films, 269
optical properties of carbon films deposited using a hybrid physical vapour deposition technique, 327
optical and mechanical properties of carbon films grown using a fast atom beam source, 722
Optimal energy
determination of the optimal energy range for obtaining diamond-like films by ion implantation, 433
Oxygen
growth and properties of diamond films prepared by microwave plasma chemical vapour deposition using different oxygen-containing source gases, 13
shape changes during growth of diamond particles and films synthesized from $CH_4-H_2-(O_2)$ by tungsten-filament chemical vapour deposition, 545

Passivation
dielectric strength of thin passivating diamond films for semiconductor devices, 496
Penning discharge
planing of synthetic diamond film by the Penning discharge microsputtering method, 474
Penning discharge microsputtering
planing of synthetic diamond film by the Penning discharge microsputtering method, 474
Photoconductivity
photoconductive measurements on microwave-assisted plasma-enhanced chemically vapor deposited diamond films, 356
Photoelectron emission
photoelectron emission from diamond films, 481
Physical properties
physical properties of carbon films produced using a hybrid physical vapour deposition tehcnique, 315
physical properties of plasma-enhanced chemically vapour deposited hydrogenated and nitrogenated amorphous carbons, 299
Planing
planing of synthetic diamond film by the Penning discharge microsputtering method, 474

Plasma method
tribiological properties and characterization of diamond-like carbon coatings with silicon prepared by plasma-assisted chemical vapour deposition, 710
Plasma methods
growth and properties of diamond films prepared by microwave plasma chemical vapour deposition using different oxygen-containing source gases, 13
investigation of diamond growth in a new planar microwave plasma source, 29
low temperature growth of highly purified diamond films using microwave plasma-assisted chemical vapour deposition, 1
photoconductive measurements on microwave-assisted plasma-enhanced chemically vapor deposited diamond films, 356
plasma deposition of hydrogenated amorphous carbon (a-C:H) under a wide bias potential range, 89
plasma-assisted chemical vapour deposition of diamond from an ethanol–water–hydrogen gas mixture, 623
relationship between emission spectroscopy and structural properties of diamond films synthesized by plasma-assisted chemical vapor deposition, 608
Platinum
hydrogenation of the atomic carbon deposited on the Pt(111) surface studied by low electron energy loss spectroscopy and thermal desorption mass spectrometry, 224
Polycrystalline diamond
electron spin resonance study of the defects in poly-crystalline diamond films, 538
1.681 eV centre in polycrystalline diamond, 336
Precision friction pairs
formation of diamond-like carbon coatings for raising the wear resistance of precision friction pairs, 792
Pulsed plasma accelerators
electrical erosion pulsed plasma accelerators for preparing diamond-like coatings, 522
Pyrolysis
substrate-free gas-phase synthesis of diamond powder by CO_2 laser pyrolysis of C_2H_4, 22

R.f. arc plasma
system for depositing hard diamond-like films onto complex-shaped machine elements in an r.f. arc plasma, 106
R.f. discharge
deposition of carbon films by the dissociation of methane in r.f. discharge, 69
R.f. plasma beam source
investigation of hard a-C:H layers generated by a novel r.f. plasma beam source, 162
R.f. plasma method
new "cyclic" r.f. plasma method for the deposition of diamond-like carbon films, 173
Range parameters
depth distributions and range parameters for elements implanted into single-crystal diamonds and chemically vapor-deposited polycrystal diamond films, 559
Rapid growth
rapid growth of single-crystal diamond on diamond substrates, 113
Rayleigh surface phonon
Brillouin light scattering from the Rayleigh surface phonon of thermally annealed a-C:H films, 687
Resistor material
abrasion resistance of diamond-like carbon coatings on thick film resistor material, 761

Schottky barriers
diamond–nickel interfaces: calculation of the electronic and atomic structure and Schottky barriers, 487
Selective deposition.
microfabrication of diamond films: selective deposition and etching, 465
Semiconductor devices
dielectric strength of thin passivating diamond films for semiconductor devices, 496
Shape changes
shape changes during growth of diamond particles and films synthesized from CH_4–H_2–(O_2) by tungsten-filament chemical vapour deposition, 545

Shearing
evaluation of abrasion resistance and adhesion strength of brazed diamond film by a shearing test, 572
Silicon
atomic cluster study of chemisorption and epitaxial diamond films on an Si(100) substrate, 578
tribiological properties and characterization of diamond-like carbon coatings with silicon prepared by plasma-assisted chemical vapour deposition, 710
Single-crystal diamond
rapid growth of single-crystal diamond on diamond substrates, 113
sp^2-to-sp^3 ratio
study of the sp^2-to-sp^3 ratio of dual-ion-beam sputtered hydrogenated amorphous carbon films, 287
Sputtering
formation of diamond-like carbon films by 50 Hz sputtering from dual graphite targets, 533
Stainless steel
deposition of a diamond-like carbon film on a stainless steel substrate: studies of intermediate layers, 84
Structure
properties and structure of carbon films prepared by ion-beam deposition, 233
relationship between emission spectroscopy and structural properties of diamond films synthesized by plasma-assisted chemical vapor deposition, 608
structure and properties of carbon films prepared by pulsed vacuum arc deposition, 292
textured structure of diamond-like carbon prepared with hydrogen, 754
structure of a C:H by neutron and X-ray scattering, 668
thermal conductivity and structure of diamond films, 388
Substrate orientation
thermal chemical vapour deposition of homoepitaxial diamond: dependence of surface morphology and defect structure on substrate orientation, 39
Substrate-free synthesis
substrate-free gas-phase synthesis of diamond powder by CO_2 laser pyrolysis of C_2H_4, 22
Superhard coatings
superhard i-C coating used in complex processes of surface strengthening of tools and machine parts, 770
Surface recrystallization
nickel-assisted metastable diamond formation (surface recrystallization) in a dissolution medium at atmospheric pressure, 127
Surface strengthening
superhard i-C coating used in complex processes of surface strengthening of tools and machine parts, 770

Tantalum
carburization of tungsten and tantalum filaments during low-pressure diamond deposition, 585
Thermal conductivity
thermal conductivity and structure of diamond films, 388
thermochemistry
theoretical thermochemistry of diamond-like carbon film growth, 517
Thick film technology
diamond: a novel substrate for thick film technology, 553
Titanium
the properties of titanium-containing amorphous hydrogenated carbon films, 691
Transistors
diamond-like films as a protecting insulator for gas-detecting suspended-gate field effect transistors, 746
Tribology
Tribological properties and characterization of diamond-like carbon coatings with silicon prepared by plasma-assisted chemical vapour deposition, 710
tungsten
carburization of tungsten and tantalum filaments during low pressure diamond deposition, 585
Shape changes during growth of diamond particles and films synthesized from $CH_4-H_2-(O_2)$ by tungsten-filament chemical vapour deposition, 545

UV laser plasma
carbon films deposited from UV laser, plasma, 503

Vacuum arc deposition
properties of diamond-like coatings prepared by vacuum arc deposition, 98
structure and properties of carbon films prepared by pulsed vacuum arc deposition, 292

Water
plasma-assisted chemical vapour deposition of diamond from an ethanol–water–hydrogen gas mixture, 623
Wear
formation of diamond-like carbon coatings for raising the wear resistance of precision friction pairs, 792
wear resistance of diamond-like coatings, 201
wear resistance of diamond-like carbon coatings, 252

X-ray emissions
X-ray emission spectra of diamond films, 628
X-ray scattering
structure of a C:H by neutron and X-ray scattering, 668